

LAB-1

```
import java.util.Scanner ;
import java.lang.Math ;
class Lab1_08 Main {
    public static void main (String arg[]) {
        Scanner S1 = new Scanner (System.in) ;
        System.out.println("....Roots of Quadratic Equation....");
        System.out.println("Enter the values of a b c in
            decreasing order of its corresponding
            -g variable powers");
        double n, Sqrt;
        double a = S1.nextDouble();
        double b = S1.nextDouble();
        double c = S1.nextDouble();
        double D = (Math.pow(b,2)) - 4*a*c;
        if (D < 0) {
            Sqrt = (Math.Sqrt(-D)) / (2*a);
            n = (-b) / (2*a);
            System.out.println("D is -ve, roots are imaginary");
            System.out.println("Imaginary roots are : " + n + "+i"
                + Sqrt + "and" + n + "-i" + Sqrt);
        }
        else if (D > 0) {
            Sqrt = (Math.Sqrt(D)) / (2*a);
            n = (-b) / (2*a);
            System.out.println("Real Roots are : " + (n+Sqrt) +
                "and" + (n-Sqrt));
        }
        else {
            n = (-b) / (2*a);
            System.out.println("Roots are equal, i.e., " + n);
        }
    }
}
```